IN THE CLAIMS:

1. (Currently Amended) An Ethernet passive optical network (EPON) for convergence of broadcasting and communication, the Ethernet passive optical network comprising:

an optical line terminal (OLT) for switching digital broadcasting and/or digital image data according to broadcasting and/or image selection information from each of multiple optical network terminals (ONTs), modulating the switched data into frequencies assigned to each ONT of the multiple ONTs, coupling with a communication signal a signal formed from combining the modulated data, and transmitting the coupled signal, the digital broadcasting and/or digital image data being transmitted from an outside broadcaster, the communication signal being obtained by optically modulating communication data from an IP network;

said multiple ONTs, said ONTs being configured for receiving an optical signal from the OLT, dividing the optical signal into the combined signal and the communication signal, converting the divided signals into electrical signals, demodulating the converted combined signal into assigned frequencies, outputting the demodulated information and the converted communication signal to a user, receiving from the user communication data and the broadcasting and/or image selection information, and outputting the communication data and broadcasting and/or image selection information to the OLT; and

a divider for dividing the signal from the OLT among the multiple ONTs, joining signals from the multiple ONTs, and transmitting the joined signal to the OLT;

wherein frequency components are assigned to each ONT with specific broadcasting and/or image transmission frequencies according to ONTs, so as to prevent broadcasting and/or image signals selected by each ONT from colliding with each other on an optical line.

2. (Original) The EPON for convergence of broadcasting and communication as claimed in claim 1, wherein the OLT comprises:

a broadcasting and/or image channel selection switch for receiving from an external source MPEG broadcasting and MPEG image data, and switching the received MPEG data;

multiple QAM modulators for digitally modulating broadcasting and/or image channels, which are outputted from the broadcasting and/or image, channel selection switch, into carrier frequencies assigned to each ONT to create respective broadcasting and/or image signals;

a combiner for receiving said broadcasting and/or image signals and combining the received broadcasting and/or image signals into one signal which is said signal formed from combining the modulated data;

a first optical transmitter for optically modulating said one signal;

an EPON OLT function processing unit for processing OLT functions of an EPON;

an IP router for routing communication data to either an upper IP network or the EPON OLT function processing unit;

a second optical transmitter for optically modulating communication data from

the multiple ONTs;

a first optical receiver for receiving optical signals from the multiple ONTs, converting the received optical signals into electrical signals, and transmitting the converted signals to the EPON OLT function processing unit;

a broadcasting and/or image channel selection control unit for receiving broadcasting and/or image selection information from the EPON OLT function processing unit and transmitting control signals to the broadcasting and/or image channel selection switch, the broadcasting and/or image selection information being transmitted from the multiple ONTs, the control signals being used in order to select broadcasting and/or image channels corresponding to the multiple ONTs; and

a first WDM coupler for forming said coupled signal, and outputting said coupled signal as an optical signal.

3. (Currently Amended) ~~The EPON for convergence of broadcasting and communication as claimed in claim 2~~Ethernet passive optical network (EPON) for convergence of broadcasting and communication, the Ethernet passive optical network comprising:

an optical line terminal (OLT) for switching digital broadcasting and/or digital image data according to broadcasting and/or image selection information from each of multiple optical network terminals (ONTs), modulating the switched data into frequencies assigned to each ONT of the multiple ONTs, coupling with a communication signal a signal formed from combining the modulated data, and transmitting the coupled signal, the digital broadcasting and/or digital image data being transmitted from an

outside broadcaster, the communication signal being obtained by optically modulating communication data from an IP network;

said multiple ONTs, said ONTs being configured for receiving an optical signal from the OLT, dividing the optical signal into the combined signal and the communication signal, converting the divided signals into electrical signals, demodulating the converted combined signal into assigned frequencies, outputting the demodulated information and the converted communication signal to a user, receiving from the user communication data and the broadcasting and/or image selection information, and outputting the communication data and broadcasting and/or image selection information to the OLT; and

a divider for dividing the signal from the OLT among the multiple ONTs, joining signals from the multiple ONTs, and transmitting the joined signal to the OLT,

wherein the OLT comprises:

a broadcasting and/or image channel selection switch for receiving from an external source MPEG broadcasting and MPEG image data, and switching the received MPEG data;

multiple QAM modulators for digitally modulating broadcasting and/or image channels, which are outputted from the broadcasting and/or image channel selection switch, into carrier frequencies assigned to each ONT to create respective broadcasting and/or image signals;

a combiner for receiving said broadcasting and/or image signals and combining the received broadcasting and/or image signals into one signal which is said signal formed from combining the modulated data;

a first optical transmitter for optically modulating said one signal;

an EPON OLT function processing unit for processing OLT functions of an EPON;

an IP router for routing communication data to either an upper IP network or the EPON OLT function processing unit;

a second optical transmitter for optically modulating communication data from the multiple ONTs;

a first optical receiver for receiving optical signals from the multiple ONTs, converting the received optical signals into electrical signals, and transmitting the converted signals to the EPON OLT function processing unit;

a broadcasting and/or image channel selection control unit for receiving broadcasting and/or image selection information from the EPON OLT function processing unit and transmitting control signals to the broadcasting and/or image channel selection switch, the broadcasting and/or image selection information being transmitted from the multiple ONTs, the control signals being used in order to select broadcasting and/or image channels corresponding to the multiple ONTs; and

a first WDM coupler for forming said coupled signal, and outputting said coupled signal as an optical signal, and

wherein each of the multiple ONTs comprising:

a second WDM coupler for dividing the optical signal transmitted from the OLT into a communication signal λ_{DOWN} and a broadcasting/image signal λ_B;

a second optical receiver for receiving the divided communication signal λ_{DOWN} and converting the received signal into an electrical signal;

a third optical receiver for receiving the divided broadcasting/image signal λ_B and converting the received signal into an electrical signal;

an EPON OLT function processing unit for processing ONT functions;

a third optical transmitter for receiving said communication data and broadcasting and/or image selection information from the EPON ONT function processing unit, and outputting an optical signal λ_{UP};

a divider for dividing the converted broadcasting and/or image signal into signals according to each image source; and

multiple QAM demodulators for detecting signals, which have frequency components assigned according to ONTs, from the divided broadcasting and/or image signals, and then restoring broadcasting and/or image data.

4. (Original) The EPON for convergence of broadcasting and communication as claimed in claim 3, wherein the frequency components are assigned to each ONT with specific broadcasting and/or image transmission frequencies according to ONTs, so as to prevent broadcasting and/or image signals selected by each ONT from colliding with each other on an optical line.

5. (Original) The EPON for convergence of broadcasting and communication as claimed in claim 3, wherein an upstream signal in an interactive broadcasting is transmitted by means of broadcasting and/or image selection information from the ONT.

6. (Currently Amended) ~~The EPON for convergence of broadcasting and communication as claimed in claim 1~~An Ethernet passive optical network (EPON) for convergence of broadcasting and communication, the Ethernet passive optical network comprising:

an optical line terminal (OLT) for switching digital broadcasting and/or digital image data according to broadcasting and/or image selection information from each of multiple optical network terminals (ONTs), modulating the switched data into frequencies assigned to each ONT of the multiple ONTs, coupling with a communication signal a signal formed from combining the modulated data, and transmitting the coupled signal, the digital broadcasting and/or digital image data being transmitted from an outside broadcaster, the communication signal being obtained by optically modulating communication data from an IP network;

said multiple ONTs, said ONTs being configured for receiving an optical signal from the OLT, dividing the optical signal into the combined signal and the communication signal, converting the divided signals into electrical signals, demodulating the converted combined signal into assigned frequencies, outputting the demodulated information and the converted communication signal to a user, receiving from the user communication data and the broadcasting and/or image selection information, and outputting the communication data and broadcasting and/or image selection information to the OLT; and

a divider for dividing the signal from the OLT among the multiple ONTs, joining signals from the multiple ONTs, and transmitting the joined signal to the OLT,

wherein each of the multiple ONTs comprising:

a ~~second~~ WDM coupler for dividing the optical signal transmitted from the OLT into the communication signal λ_{DOWN} and a broadcasting and/or image signal λ_B;

a second optical receiver for receiving the divided communication signal λ_{DOWN} and converting the received signal into an electrical signal;

a third optical receiver for receiving the divided broadcasting and/or image signal λ_B and converting the received signal into an electrical signal;

an EPON OLT function processing unit for processing ONT functions;

a third optical transmitter for receiving a communication signal and broadcasting and/or image selection information, which are transmitted from an ONT of the multiple ONTs to the OLT, from the EPON OLT function processing unit, and outputting an optical signal λ_{UP};

a divider for dividing the converted broadcasting and/or image signal into signals according to each image source; and

multiple QAM demodulators for detecting signals, which have frequency components assigned according to ONTs, from the divided broadcasting and/or image signals, and then restoring broadcasting and/or image data.

7. (Original) The EPON for convergence of broadcasting and communication as claimed in claim 6, wherein the frequency components are assigned to each ONT with specific broadcasting and/or image transmission frequencies according to ONTs, so as to prevent broadcasting and/or image signals selected by each ONT from colliding with each other on an optical line.

8. (Original) The EPON for convergence of broadcasting and communication as claimed in claim 6, wherein an upstream signal in an interactive broadcasting is transmitted by means of broadcasting and/or image selection information from the ONT.

9. (Original) The EPON of claim 1, wherein the OLT is configured for switching both digital broadcasting and digital image data.

10. (Original) The EPON of claim 9, wherein said converted combined signal is demodulated into a plurality of frequencies for an ONT of said multiple ONTs.

11. (Original) The EPON of claim 10, comprising a plurality of additional OLTs, at least some of the plural OLTs receiving N broadcasting channels and M image channels, N and M being positive integers.

12. (Original) The EPON of claim 11, wherein each of the plural OLTs receives N broadcasting channels and M image channels, N and M being positive integers.

13. (Original) The EPON of claim 1, wherein said converted combined signal is demodulated into a plurality of frequencies for an ONT of said multiple ONTs.

14. (Original) The EPON of claim 1, comprising a plurality of additional OLTs, at least some of the plural OLTs receiving N broadcasting channels and M image channels, N and M being positive integers.

15. (Original) The EPON of claim 14, wherein each of the plural OLTs receives N broadcasting channels and M image channels, N and M being positive integers.

16. (Currently Amended) An optical line terminal (OLT) in an Ethernet passive optical network (EPON) for convergence of broadcasting and communication, the OLT being configured for switching digital broadcasting and/or digital image data according to broadcasting and/or image selection information from each of multiple optical network terminals (ONTs), modulating the switched data into frequencies assigned to each ONT of the multiple ONTs, coupling with a communication signal a signal formed from combining the modulated data, and transmitting the coupled signal without using an Erbium Doped Fiber Array (EDFA), the digital broadcasting and/or digital image data being transmitted from an outside broadcaster, the communication signal being obtained by optically modulating communication data from an IP network.

17. (Original) The OLT of claim 16, said OLT being configured for switching both digital broadcasting and digital image data.

18. (Original) The OLT of claim 16, wherein said converted combined signal is demodulated into a plurality of frequencies for an ONT of said multiple ONTs.

19. (Currently Amended) An optical network terminal (ONT) for receiving an optical signal from an optical line terminal (OLT), dividing the optical signal into a digital broadcasting and/or image signal and a communication signal, converting the divided signals into electrical signals, demodulating the converted broadcasting and/or image signal into assigned frequencies, outputting the demodulated broadcasting and/or image information and the converted communication signal to a user, receiving from the user communication data and broadcasting and/or image selection information, and outputting said communication data and broadcasting and/or image selection information to the OLT;

wherein said ONT further comprises;

a WDM coupler for dividing the optical signal transmitted from the OLT into a communication signal λ_{DOWN} and a broadcasting and/or image signal λ_B;

a second optical receiver for receiving the divided communication signal λ_{DOWN} and converting the received signal into an electrical signal;

a third optical receiver for receiving the divided broadcasting and/or image signal λ_B and converting the received signal into an electrical signal;

an EPON OLT function processing unit for processing ONT functions;

a third optical transmitter for receiving said communication data and broadcasting and/or image selection information from the EPON ONT function processing unit, and outputting an optical signal λ_{UP};

a divider for dividing the converted broadcasting and/or image signal into signals according to each image source; and

multiple QAM demodulators for detecting signals, which have respective frequency components, from the divided broadcasting and/or image signals, and then restoring broadcasting and/or image data.

20. (Canceled)